THE EVOLUTION OF THE BLOCKCHAIN THROUGH STANDARDS: THE INTERNATIONAL STATE OF THE ART

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The Blockchain technology, used as it is today, was published for the first time in a white paper of October 2008 on an encryption mailing list, in a document entitled "Bitcoin: A Peer-to-Peer Electronic Cash System", published by an author, or group of authors, under the pseudonym of Satoshi Nakamoto.

Curiously, it should be noted that some of the principles incorporated in the Blockchain technology, underlying the "Bitcoin" of the above mentioned document, were however already described in previous cryptographic documents, moreover the term Blockchain is never used in the original document, while expressions such as "chain of blocks" and "chained blocks" were.

On January 9, 2009, Satoshi Nakamoto released version 0.1 of the "Bitcoin" software, which was the first to implement the principles described in the October 2008 document.

To understand the innovation brought by the Blockchain it is necessary to talk also about the Technical Regulations (Standards) and the interoperability of data based on them. In the EU the ENs, and in the world the ISO standards, ITU..., are already governing the technological evolution that is changing the world to which we were accustomed. And they are doing so with an acceleration that has never been so rapid before.

Basic needs at the origin of Blockchain and DLT:

- the possibility to integrate services and applications managed by different subjects,
- provide sufficient guarantees of the availability, integrity and origin of information and transactions.

The challenges are manifold for the vastness of the domains of application, in a substantially immature market, and for the paradigm shift underlying the technology.

The data is no longer centralized but distributed, so the threats do not concern the individual but the whole community.

In emerging and consolidating scenarios, standards can play a key enabling role in creating a reliable ecosystem and opportunities for all actors involved, including SMEs.

A specific subgroup of the Focus Group has developed a white paper with the aim of identifying the specific European needs to be addressed in ISO/TC 307 for the implementation of Blockchain/DLT in Europe. The white paper, approved by CEN and CENELEC on October 10th 2018, contains several recommendations without taking specific positions on their implementation «Recommendations for Successful Adoption in Europe of Emerging Technical Standards on Distributed Ledger/Blockchain Technologies».

The FG DLT (Distributed Ledger Technology) adopted eight products in the form of technical specifications and technical reports on 1 August 2019 in Geneva.

Specifically the five categories into which the reports fall are:

1) terms & definitions + what other standards organisations are doing,

2) horizontal + vertical use cases, benefits and barriers of adopting DLT,

3) architecture of various DLT platforms and description of taxonomy,

4) legislative framework,

5) future outlook of DLT moving forward.

WG 1 define a common vocabulary and reference architecture.

WG 2 security, privacy and identity deals with key aspects for the future of these technologies, in particular privacy and identity (GDPR and eIDAS regulations).

WG 3 smart contracts and their applications addresses the issue of intelligent contracts and how to make them legally binding.

WG 5 define guidelines in one of the most important and potentially controversial areas.

WG 6 maintains a list of use cases.

SG 7 Interoperability of blockchain and DLT systems is a study group that deals with interoperability aspects across the different groups.

JWG 4 Blockchain & DLT and IT Security techniques is a joint working group with JTC 1/SC 27 to direct security issues along the lines of SC27 or the well-known ISO/IEC 27000 family of standards.

EDUCATION IN COMPETITIVE AND MARKET INTELLIGENCE: NEW PERSPECTIVES TO GAIN COMPETITIVE ADVANTAGE

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ICI’s certificate programs convey knowledge and skills in competitive and market intelligence at a master degree level. With the gained know-how and